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10/804,766	03/19/2004	Toshie Imai	MIPFP057.CIP	7669

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EXAMINER

KHAN, USMAN A

ART UNIT	PAPER NUMBER
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2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/804,766

Applicant(s)

IMAI, TOSHIE

Examiner

Usman Khan

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-12, 15-22, 24-27 and 29 is/are pending in the application.
- 4a) Of the above claim(s) 2-8, 12, 13, 16-22, 26 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 10, 11, 15, 24, 25 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Arguments

Applicant's arguments filed on 11/21/2007 with respect to claims 1, 10, 11, 15, 24, 25, and 29 have been considered but are moot in view of the new ground(s) of rejection.

Regarding Double Patenting rejection to claims 1, 14, 15, 28, and 29 provided in the previous office. Applicant has amended claims 1, 15, and 29 to overcome the Double Patenting rejection to claims 1, 15, and 29. Also, applicant has canceled claims 14 and 28 thereby the Double Patenting rejection pertaining to claims 14 and 28 have been withdrawn.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 10/24/2007 has been considered by the examiner. The submission is in compliance with the provisions of 37 CFR 1.97.

Claim Objection

Claims 10 – 11 and 24 - 25 are objected to because of the following informalities: each of these dependent claims should start with "The". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al. (US patent No. 5,940,530) in further view of Doi et al. (US patent No. 5,224,177).

Regarding **claim 1**, Fukushima et al. teaches an image processing device for processing an image using image data generated by an image generating device (Abstract, also column 10, lines 1 – 27), and image generation record information that is associated with the image data and that includes operation information for the image generating device at the time that the image data is generated (Column 3 lines 34 – 44; scene information determination and degree of brightness information determination; also column 10, lines 1 – 27), the image processing device comprising: a judging section configured to execute a backlight decision as to whether or not to execute backlight adjustment processing (figures 2 and 7 items 201 *et seq.* backlight evaluation and correction; also column 7 line 64 – column 8 line 27 and column 12 lines 20 *et seq.*; backlighting evaluation and brightness/luminance correction), based on both the image generation record information and the image data (column 10, lines 1 – 27);

the judging section performs: (i) first judgment to decide whether or not the image generation record information negates necessity of the backlight adjustment processing

(figure 2 item 207), and (ii) second judgment, when the image generation record information does not negates the necessity of the backlight adjustment processing in the first judgment, to decide whether or not to execute the backlight adjustment processing (figure 2 item 207).

and an image quality adjuster that, when it is decided to execute the backlight adjustment processing, executes backlight adjustment processing to increase brightness value of at least some pixels in the image data (figures 2 and 7 items 201 *et seq.* backlight evaluation and correction; also column 7 line 64 – column 8 line 27 and column 12 lines 20 *et seq.*; backlighting evaluation and brightness/luminance correction).

However Fukushima et al. fails to teach that an adjustment processing is based on a pixel value histogram of the image data. Doi et al., on the other hand teaches that an adjustment processing is based on a pixel value histogram of the image data.

More specifically, Doi et al. teaches teach that an adjustment processing is based on a pixel value histogram of the image data (column 4 lines 36 *et seq.* and column 6 lines 46 - 60).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Doi et al. with the teachings of Fukushima et al. because as stated in column 4 lines 36 - 62 and column 6 lines 46 – 60 Doi et al. teaches that using the invention one can use a pixel value histogram for correcting images.

Regarding **claim 15**, Fukushima et al. teaches a method of processing an image using image data generated by an image generating device (Abstract, also column 10, lines 1 – 27), and image generation record information that is associated with the image data and that includes operation information for the image generating device at the time that the image data is generated (Column 3 lines 34 – 44; scene information determination and degree of brightness information determination; also column 10, lines 1 – 27), the method comprising the steps of:

(a) executing a backlight decision as to whether or not to execute backlight adjustment processing, based on both the image generation record information and the image data (figures 2 and 7 items 201 *et seq.* backlight evaluation and correction; also column 7 line 64 – column 8 line 27 and column 12 lines 20 *et seq.*; backlighting evaluation and brightness/luminance correction);

the executing of the backlight decision including (i) performing first judgment to decide whether or not the image generation record information negates necessity of the backlight adjustment processing (figure 2 item 207); and (ii) performing second judgment, when the image generation record information does not negates the necessity of the backlight adjustment processing in the first judgment, to decide whether or not to execute the backlight adjustment processing (figure 2 item 207) and

(b) when it is decided to execute the backlight adjustment processing, executing backlight adjustment processing to increase brightness value of at least some pixels in the image data (figures 2 and 7 items 201 *et seq.* backlight evaluation and correction;

also column 7 line 64 – column 8 line 27 and column 12 lines 20 *et seq.*; backlighting evaluation and brightness/luminance correction).

However Fukushima et al. fails to teach that an adjustment processing is based on a pixel value histogram of the image data. Doi et al., on the other hand teaches that an adjustment processing is based on a pixel value histogram of the image data.

More specifically, Doi et al. teaches that an adjustment processing is based on a pixel value histogram of the image data (column 4 lines 36 *et seq.* and column 6 lines 46 - 60).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Doi et al. with the teachings of Fukushima et al. because as stated in column 4 lines 36 - 62 and column 6 lines 46 – 60 Doi et al. teaches that using the invention one can use a pixel value histogram for correcting images.

Claims 1, 10 – 11, 15, 23 – 25, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchino et al. (US PgPub 2002/0008771) in further view of Doi et al. (US patent No. 5,224,177).

Regarding **claim 1**, Uchino et al. teaches an image processing device for processing an image using image data generated by an image generating device (figures 1 – 2, item 1), and image generation record information that is associated with the image data (paragraph 0050, 0062, and 0071) and that includes operation

information for the image generating device (paragraphs 0009, 0049, and 0057) at the time that the image data is generated (0049, and 0062), the image processing device comprising: a judging section (figure 5 item 321) configured to execute a backlight decision as to whether or not to execute backlight adjustment processing (paragraphs 0062 and 0065), based on both the image generation record information and the image data (paragraphs 0072 – 0074);

the judging section performs: (i) first judgment to decide whether or not the image generation record information negates necessity of the backlight adjustment processing (figure 5 item 321 and paragraphs 0053 and 0067-0068), and (ii) second judgment, when the image generation record information does not negate the necessity of the backlight adjustment processing in the first judgment, to decide whether or not to execute the backlight adjustment processing (paragraph 0039 and figure 5 item 321 and paragraphs 0053 and 0067-0068).

and an image quality adjuster that, when it is decided to execute the backlight adjustment processing (paragraphs 0062 and 0065), executes backlight adjustment processing to increase brightness value of at least some pixels in the image data (paragraphs 0065, 0072, and 0074).

However Uchino et al. fails to teach that an adjustment processing is based on a pixel value histogram of the image data. Doi et al., on the other hand teaches that an adjustment processing is based on a pixel value histogram of the image data.

More specifically, Doi et al. teaches that an adjustment processing is based on a pixel value histogram of the image data (column 4 lines 36 *et seq.* and column 6 lines 46 - 60).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Doi et al. with the teachings of Uchino et al. because as stated in column 4 lines 36 - 62 and column 6 lines 46 - 60 Doi et al. teaches that using the invention one can use a pixel value histogram for correcting images.

Regarding **claim 10**, as mentioned above in the discussion of claim 9, Uchino et al. in further view of Doi et al. teaches all of the limitations of the parent claim. Additionally, in further view of Doi et al. teaches that the judging section calculates a degree of similarity between the pixel value histogram and a predetermined reference histogram, and makes the second judgment according to the degree of similarity (figure 7 determination of a pixel value and selection of optimal look-up table; also column 1 lines 47 - 66, column 4 lines 36 *et seq.*, and column 6 lines 46 - 60, Histogram).

Regarding **claim 11**, as mentioned above in the discussion of claim 10, Uchino et al. in further view of Doi et al. teaches all of the limitations of the parent claim. Additionally, Doi et al. teaches that the pixel value histogram and the reference histogram each have a simplified format in which a range of pixel values is divided into a plurality of segments, and a representative pixel frequency value is established for

each segment; and the degree of similarity represents similarity of the representative pixel frequency value of each segment between the pixel value histogram and the reference histogram (figure 7 determination of a pixel value and selection of optimal look-up table; also column 1 lines 47 – 66, column 4 lines 36 *et seq.*, and column 6 lines 46 – 60, Histogram).

Regarding **claim 15**, Uchino et al. teaches a method of processing an image using image data generated by an image generating device (figures 1 – 2, item 1), and image generation record information that is associated with the image data (paragraph 0050, 0062, and 0071) and that includes operation information for the image generating device (paragraphs 0009, 0049, and 0057) at the time that the image data is generated (0049, and 0062), the method comprising the steps of:

(a) executing a backlight decision as to whether or not to execute backlight adjustment processing (paragraphs 0062 and 0065), based on both the image generation record information and the image data (paragraphs 0072 - 0074), the executing of the backlight decision including (i) performing first judgment to decide whether or not the image generation record information negates necessity of the backlight adjustment processing (figure 5 item 321 and paragraphs 0053 and 0067-0068); and (ii) performing second judgment, when the image generation record information does not negates the necessity of the backlight adjustment processing in the first judgment, to decide whether or not to execute the backlight adjustment

processing (paragraph 0039 and figure 5 item 321 and paragraphs 0053 and 0067-0068); and

(b) when it is decided to execute the backlight adjustment processing (paragraphs 0062 and 0065), executing backlight adjustment processing to increase brightness value of at least some pixels in the image data (paragraphs 0065, 0072 and 0074).

However Uchino et al. fails to teach that an adjustment processing is based on a pixel value histogram of the image data. Doi et al., on the other hand teaches that an adjustment processing is based on a pixel value histogram of the image data.

More specifically, Doi et al. teaches that an adjustment processing is based on a pixel value histogram of the image data (column 4 lines 36 *et seq.* and column 6 lines 46 - 60).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Doi et al. with the teachings of Uchino et al. because as stated in column 4 lines 36 - 62 and column 6 lines 46 - 60 Doi et al. teaches that using the invention one can use a pixel value histogram for correcting images.

Regarding **claim 24**, as mentioned above in the discussion of claim 23, Uchino et al. in further view of Doi et al. teaches all of the limitations of the parent claim. Additionally, Uchino et al. teaches that the step (a) further includes calculating a degree of similarity between the pixel value histogram and a predetermined reference

histogram, and making the second judgment according to the degree of similarity (figure 7 determination of a pixel value and selection of optimal look-up table; also column 1 lines 47 – 66, column 4 lines 36 *et seq.*, and column 6 lines 46 – 60, Histogram).

Regarding **claim 25**, as mentioned above in the discussion of claim 24, Uchino et al. in further view of Doi et al. teaches all of the limitations of the parent claim. Additionally, Doi et al. teaches that the pixel value histogram and the reference histogram each have a simplified format in which a range of pixel values is divided into a plurality of segments, and a representative pixel frequency value is established for each segment; and the degree of similarity represents similarity of the representative pixel frequency value of each segment between the pixel value histogram and the reference histogram (figure 7 determination of a pixel value and selection of optimal look-up table; also column 1 lines 47 – 66, column 4 lines 36 *et seq.*, and column 6 lines 46 – 60, Histogram).

Regarding **claim 29**, Uchino et al. teaches a computer-readable storage medium encoded with a computer program, the computer program (paragraph 0085 and 0087) comprising: a first program causing a computer (figure 14, item 40) to execute a backlight decision as to whether or not to execute backlight adjustment processing (figure 19 and paragraphs 0097 – 0101), based on both the image generation record information and the image data (paragraphs 0072 - 0073) the judging section performs: (i) first judgment to decide whether or not the image generation record information

negates necessity of the backlight adjustment processing (figure 5 item 321 and paragraphs 0053 and 0067-0068), and (ii) second judgment, when the image generation record information does not negate the necessity of the backlight adjustment processing in the first judgment, to decide whether or not to execute the backlight adjustment processing (paragraph 0039 and figure 5 item 321 and paragraphs 0053 and 0067-0068).; and

a second program, when it is decided to execute the backlight adjustment processing (paragraphs 0062 and 0065), causing the computer to execute backlight adjustment processing to increase brightness value of at least some pixels in the image data (paragraphs 0065, 0072, and 0074).

However Uchino et al. fails to teach that an adjustment processing is based on a pixel value histogram of the image data. Doi et al., on the other hand teaches that an adjustment processing is based on a pixel value histogram of the image data.

More specifically, Doi et al. teaches that an adjustment processing is based on a pixel value histogram of the image data (column 4 lines 36 *et seq.* and column 6 lines 46 - 60).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Doi et al. with the teachings of Uchino et al. because as stated in column 4 lines 36 - 62 and column 6 lines 46 - 60 Doi et al. teaches that using the invention one can use a pixel value histogram for correcting images.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Usman Khan
01/28/2008
Patent Examiner
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DAVID OMETZ
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